

Name: _____ Date: _____

A2 CC1: Rational Expressions (Equations 2)

Do Now:

a) Express in simplest form:

$$\frac{x-5}{5-x}$$

b) Explain how you can rewrite $\frac{7x}{5-x}$

In each case, solve for all values of the variable.

1) $\frac{1}{x} - \frac{1}{3} = -\frac{1}{3x}$

$$2) \frac{2}{x+3} - \frac{3}{4-x} = \frac{2x-2}{x^2-x-12}$$

$$3) \frac{x}{x+2} = \frac{3}{x} + \frac{4}{x^2+2x}$$

4) To solve $\frac{2x}{x-2} - \frac{11}{x} = \frac{8}{x^2-2x}$, Ren multiplied both sides by the least common denominator. Which statement is true?

- (1) 2 is an extraneous solution.
- (2) $\frac{7}{2}$ is an extraneous solution.
- (3) 0 and 2 are extraneous solutions.
- (4) This equation does not contain any extraneous solutions.

5) Solve for a :

$$\frac{1}{3a} + \frac{5}{12} = \frac{2}{a}$$

6) Solve for x :

$$\frac{4x}{x-3} = 2 + \frac{12}{x-3}$$

7) Solve for x : $\frac{x}{x-4} - \frac{1}{x+3} = \frac{28}{x^2 - x - 12}$

$$8) \quad \frac{3p}{p-5} - \frac{2}{p+3} = \frac{p}{p+3}$$